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Competitiveness Enhancement”**

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NÚCLEO DE INVESTIGAÇÃO EM POLÍTICAS ECONÓMICAS
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**COLLECTIVE EFFICIENCY STRATEGIES:
A REGIONAL DEVELOPMENT POLICY CONTRIBUTION FOR COMPETITIVENESS ENHANCEMENT**

Rui Nuno Baleiras*

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ABSTRACT

This is an article on policy instrument design wholly embodied in the state of the art endogenous regional development theory. The family of *Collective Efficiency Strategies* (CES) was originally conceived in Portugal during the 2005/2009 legislative term and is very much replicable in other geographies and socio-economic environments, in emerging as well as in developed territories. They matter to deliver competitiveness and jobs by boosting business links among partnership members. Firms are indispensable to operate these networks but many other private, social and public agents whose action helps to internalise agglomeration and network externalities are also welcome. Four types of CES were launched, each aiming to address specific development bottlenecks: *Growth and Competitiveness Poles*, *Other Clusters*, *Urban Regeneration and Development Actions* and *Programmes for the Economic Enhancement of Endogenous Resources*. Taken together, they provide policy action to stimulate trade-oriented knowledge provision, innovation in goods and services or processes, urban economic drivers and sustainable and durable networks of economic activity in low-density territories. Before presenting the CES, the paper provides the relevant theoretical background. A synthesis of current endogenous regional development models paves the way to introduce the key concept of collective efficiency. Some data on the application country helps to motivate the discussion.

JEL classification codes: L52; L53; O25; R38; R58.

Keywords: collective efficiency; endogenous development; regional development policy; Portugal; NSRF.

1 Introduction

Portugal has designed and launched in the period 2005 to 2009 an innovative family of four policy instruments based on the collective efficiency concept. They are labelled as “collective efficiency strategies”. This article aims at introducing the reader to these tools together with the relevant theoretical background. We believe the challenges that motivated their conception are common to many

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other countries where no similar tools are available yet. Hence, the explanations herein may provide useful inspiration to develop related instruments elsewhere.

The article reflects the author's policy-making experience during that period. This enables to share with readers an *insider's* perspective of the underlying motivation and politico-economic constraints that normally is not present in an economist's text. In doing so, some biases are probably unavoidable but we will do our best to keep them to a minimum.

The political motivation to intervene in the regional development field stemmed from the awareness of acute structural challenges in the Portuguese economy. This awareness included the perception of what were some the most important underlying causes. Market and government failures were preventing automatic adjustment mechanisms to work effectively to close the imbalances. As it will become clear in the next section, those challenges commanded important behavioural changes on the part of all economic agents, including the government. A successful policy approach could not be limited strictly to the regional development "department". Indeed, serious actions from line policies with significant territorial impact, such as education, justice and infrastructure, were requested and as much coordinated as possible. However, given the scope of this book, we will restrain the discussion to strict regional development policy action.

The preceding four decades witnessed an impressive correction of interregional asymmetries related to the population access to network services (electricity, sewerage, education, health care, mobility, telecommunications, etc.), to a large extent captured by comfort indicators. Competitiveness markers have evolved positively too, both in terms of interregional differences and in terms of national real convergence to the EU average. However, competitiveness progresses were weaker than comfort gains and there is clear evidence of a negative evolution in the last ten years. This empirical background is not strange to many other economies. A number of Portuguese competitive vulnerabilities were identified by policy-making at the diagnosis phase (2006) and we guess some of them, at least, show their influence in other countries as well: small scale of most firms facing international competition, cooperation deficit among economic agents, insufficient articulation between knowledge providers and knowledge users, lack of private ownership interventions in urban renewal operations, and a long-lasting vicious circle of impoverishing development in low population density territories. We thus believe in the transportability of the *Collective Efficiency Strategies* framework to other geographies.

The design of these policy tools benefited a lot from economic theory, in particular from the *endogenous regional development* literature. In order to fully appraise the policy rationale, the paper provides a synthesis of the relevant theoretical background. Using a large scale lens, we first recall the current research state to stress the importance of endogenous development drivers and their interaction with the so-called exogenous factors. Then, we zoom in the theoretical arena to magnify the most important economic concept to realise these policy tools, the *collective efficiency* notion owed to Schmitz (1999). The notion combines *agglomeration economies* with appropriately defined *joint*

actions. Based on this doctrinal refreshment, we will finally proceed to more practical matters and introduce the four members of the new regional development policy instrument family.

There is one member directly headed to bridge the gap in the knowledge market with a strong global orientation: the *Competitiveness and Technology Poles*. The *Others Clusters* member aims at stimulating more conventional clustering activities where physical proximity and territorial attachment are important. *Urban Regeneration and Development Actions* intend to stimulate private-public partnerships to renew cities and explore inter-city synergies so as to improve their competitiveness prospects. *Programmes for the Economic Enhancement of Endogenous Resources* are the fourth type of Collective Efficiency Strategy; they aim at redressing the vicious development circle faced by many low density territories.

These policy instruments work through the endogenous factors of development. The idea is to stimulate local and regional communities to make use of different forms of capital endowments (human, social, creative, etc.) to provide goods and services valued by consumers in other regions and countries. Making them to realise there are moments to compete and moments to cooperate is instrumental to deliver collective efficiency on the ground and boost territorial competitiveness. In times of hard public budget constraints, it is good to know that Collective Efficiency Strategies are an extremely affordable policy instrument. Soft encouragement measures such as technical coaching, licensing procedures speed-up and political affection can be more effective than fiscal stimulus to make the difference.

The paper is organised as follows. Section 2 sketches the structural weaknesses that motivate policy action. The neoclassical economic growth model of the 1950's is recalled in Section 3, where we also introduce the sustainable regional development definition and resort to a graphical apparatus to offer a synthesis of the state of the art endogenous drivers explanations. Within this playing field, Section 4 presents the collective efficiency concept and combines neoclassical and industrial district literature arguments to illuminate feasible policy actions to overcome the kind of competitive vulnerabilities that are conditioning development prospects in Portugal and elsewhere. Section 5 makes the transition from economic theory to policy-setting; it warns about excessive confidence on public action and makes clear the link between collective efficiency and competitive vulnerabilities. The tools family is introduced in Section 6, initially through a synoptic view and subsequently via the mission of each member. A barebone presentation of operational features follows in Section 7. Section 8 shows how these tools are already aligned with EU political guidelines for the 2014–2020 cohesion policy cycle, thus presenting themselves as possible vehicles for actual implementation. Finally, Section 9 concludes.

2 The motivating problem

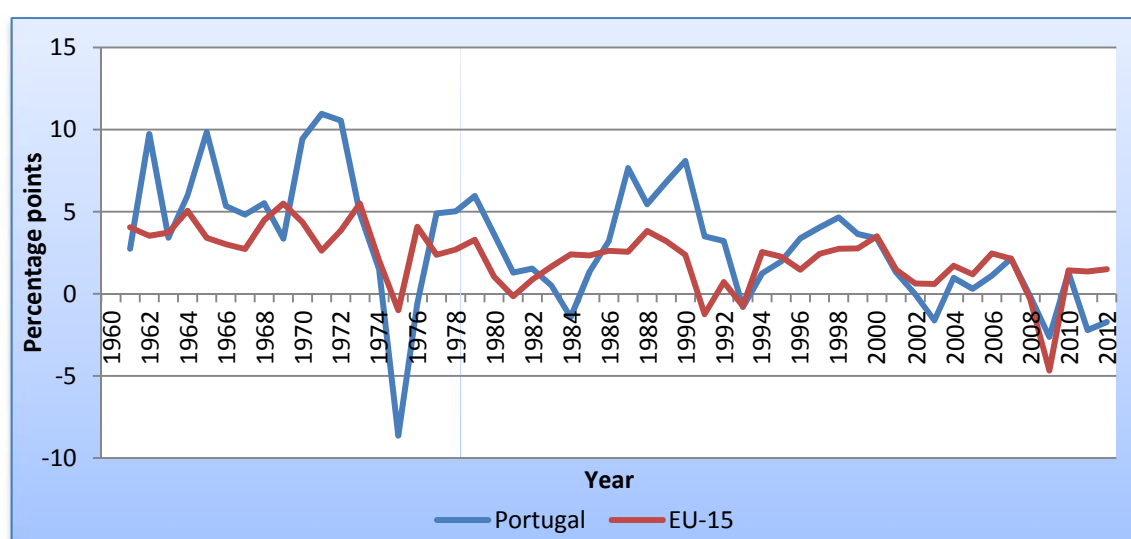
The will to act and design the policy tools we intend to show in this article emerged when the regional development branch of the Portuguese government was given the responsibility to draft the strat-

egy leading to the national allocation of the structural funds envelope in the 2007–2013 programming period of EU cohesion policy. The diagnosis by that time (2006) revealed a serious competitiveness shortage along with considerable progress in cohesion indicators and a structural cooperation deficit among economics agents. The following subsections provide a brief account of the economic background which motivated the subsequent course of regional development policy.

2.1 Disappointing real convergence path

Portugal stopped converging to the EU-15 average in the year 2000 and entered a long period of sluggish output *per capita* growth (Chart 1). As a percentage of the EU-15 homologous figure, the Portuguese share was 31.6 in 1960, peaked at 53.7 in 1999 and is expected to fall to 48.1 in 2012.¹ The reasons for the relative stagnation in the last decade are structural and various. Among the most critical ones, we may mention relatively low education levels of both workers and entrepreneurs, mismatch between demand for and supply of professional training, insufficient domestic competition, incipient market orientation of scientific outputs, slow and expensive justice services, excessive bureaucracy, long exposure to currency depreciation and devaluation episodes acting as artificial competitiveness inseminations, historical record of easy business access to taxpayers' money, everything ending up in high accumulation of both external and public debts.

Chart 1—Growth rates of *per capita* GDP at 2000 market prices



Note: original data are the RVGDP series in Euros available in the AMECO database—European Commission (2011); the EU-15 series comprises the EU Member States as in 2000; West Germany is included up to 1990 and replaced by the reunited Germany from 1991 onwards.

Source: Author's computation from European Commission (2011)'s original series.

These reasons exist for decades but got unearthed clearly only when the economy stopped converging to the European Union average nearly ten years ago. This is so because of substantive changes in

¹ The divergence *vis-à-vis* the EU average is considerably smaller when appraised according to purchasing power parities—e.g., 75.6% in 2007, as reported in the “main indicators” Excel file accompanying European Commission (2010c), against 50.4% in Chart 1.

the international trade environment. Portugal co-founded the *European Free Trade Association* (EFTA) in 1960 and was the only developing country selling labour-intensive goods at zero rate tariffs to wealthy partners while enjoying the comfort of EFTA protectionism *vis-à-vis* external competition. This model led Portugal to specialise successfully in low-skill industrial products for many years, until the globalisation triumph at the end of the nineties.

Explanations for the role each reason above played during all this period fall outside the scope of this paper; it suffices to say they have braked considerably the adjustment pace of the productive specialisation profile to the changing conditions in global competition. Fortunately, economic agents, including public authorities, are more aware of these development bottlenecks in recent years and some important sectoral policy measures are underway, from education improvements to red tape cuts. Yet, much more needs to be done on those obstacles with a determined view to the future—notably, more serious price regulation in oligopolistic markets and structural reforms on justice and health care system. Although the competitiveness problem needs to be tackled with several other policies and hopefully in a coordinated manner, it was certainly a major concern for action on the part of regional development policy.

The picture depicted in the above paragraphs is not exclusive of Portugal. Indeed, developed regions and countries face also increasing difficulties to grow. Table 1 is quite clear. USA, Canada, Japan, and the highly developed Member States impress by their modest growth rates in recent years. The financial turmoil around the sovereign debt crisis in the USA and EU at the time this text is being written (Summer 2011) has a lot to do with their competitive weaknesses in global markets of goods and services. So our subject matter may have an international interest.

Table 1—Real GDP *per capita* growth rates, 2000–2007

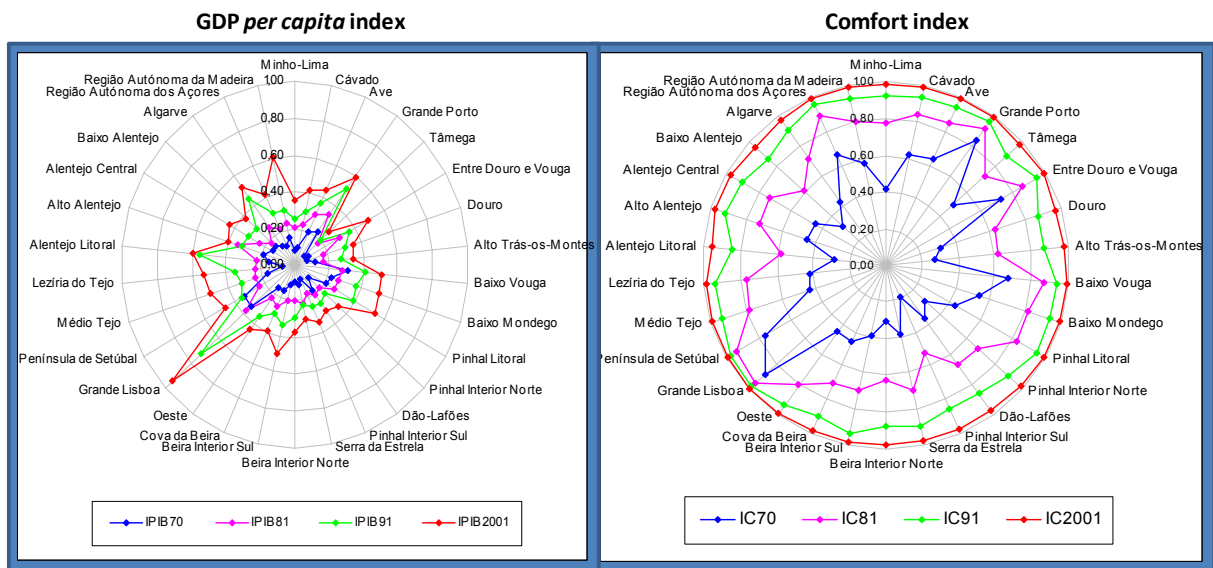
Annual average change (%)	
Brazil	3.1
Russia	7.7
India	5.2
China	9.9
Mexico	0.6
USA	1.4
Canada	1.4
Japan	1.5
EU-27	1.8
Highly-developed Member States	1.4
Moderately developed Member States	2.9
Less developed Member States	5.2

Source: European Commission (2010c, p. 1).

If real convergence of the national economy with respect to the EU benchmark became a problem in recent years, it is not a smaller concern within the country. The left panel of Chart 2 depicts the position of each NUTS level 3 region in mainland Portugal in terms of real GDP *per head*. All territories improved significantly their absolute positions since 1970, as shown by the outward displacement of

the curve. Yet, as time went by, irregularities in the curvature have not decreased and remain substantial as a consequence of strong interregional asymmetries. In 2001, Grande Lisboa (the highest *per capita* GDP region) was 3.6 times as larger than Tâmega (the lowest region, close to the northern border with Spain). The right panel unveils a very different story. The underlying figures come from a composite index (comfort index) that captures households' access to network services such as electricity, sewerage, and health care. There has been a strong overall progress since the 60's with an unambiguous correction of interregional imbalances.

Chart 2—Interregional imbalances (Portuguese NUTS level 3 regions, 1970–2001)



Source: Adapted from Cónim (1999) and Carvalho and Matias (2004).

Back to the international stage, we note that, despite the general progress in a long run perspective, there are slowing down signs in recent years on the geographic growth pattern within the EU. European Commission (2010c) reports “Convergence between regions in the EU-15 Member States was strong up to the mid 1990s, but the process since then has slowed down. From 1980 to 1996, there was clear narrowing of disparities, the coefficient of variation falling from 33 to 29. Since 1996, it has remained between 29 and 30.” So the motivation that inspired *Collective Efficiency Strategies* in Portugal is somehow present in many other countries as well.

2.2 Cooperation deficit

On top of the deep bottlenecks identified in Subsection 2.1, the economy presented an additional structural deficit: the *cooperation deficit*. For historical and sociological reasons, Portuguese individuals are quite generous in terms of personal relations but, when it comes to professional deliberations and economic decisions, then individualism plays a prominent role. This is so among private firms, among ministries, among neighbouring municipalities, and, by a continuity argument, among firms, universities, training agencies, central and local administration.²

² Adam Smith was probably having the Portuguese people in mind when he wrote in 1776 that “people of the same trade seldom meet together”... Smith (1904, Book I, Ch. 10, par. 82).

We were conscious about this competitive disadvantage. As a small economy in a globalised world, Portuguese institutions will always be small when compared to their counterparts in Germany, UK, Italy, nor to mention USA or China. Yet, small does not necessarily mean inefficient, even in products or services where scale matters. The secret lies on the smart use of all available resources for development. Endogenous regional development theory, as we will stress in the next section, have brought agglomeration economies and social capital to the attention of policy-makers as competitiveness drivers. If people trust each other and, in particular, entrepreneurs in a particular industry realise there are moments to compete and moments to cooperate among themselves, then the individual firm scale melts down as a barrier to market success. The willingness to cooperate is clearly a *place-based* intangible resource whose endowment at a given point in time results from a long, complex interplay of socio-economic factors. Some territories are well endowed, others are scarcely provided. Could policy help to inflow cooperation to a poorly endowed economic fabric? What kind of instruments would be cost-effective? These issues kept puzzling in our heads for some time. We believe that lack of cooperation is also present in the economic culture of many other countries.

3 The background from endogenous regional development theory

This section is a summary account of Baleiras (2011b, pp. 22–50). It sets the intellectual stage from which the policy tools emerged.

3.1 The early neoclassical standpoint

Seminal contributions by eminent economists, such as Harrod (1939), Domar (1946) and Solow (1956), have established an influential view about the determinants of economic growth, which became known as the neoclassical economic development explanation. Under constant returns to scale, the aggregate real output *per* labour unit (y) in a particular territory is an increasing function of capital-to-labour ratio (k) and time (t),

$$y = A(t)f(k). \quad (1)$$

Differentiating and applying growth rates, we derive the dynamic version of the neoclassical production function,

$$\hat{y} = \hat{A}(t) + \frac{f'(k)}{f}(\hat{K} - \hat{L}), \quad (2)$$

where $f' > 0$ is the marginal productivity of capital intensity, K and L are the capital and labour resource endowments, respectively, and the “ $\hat{}$ ” symbol denotes relative change between two consecutive moments. \hat{A} stands for the rate of technological progress. A few comments about the neoclassical formulation are worth noting. Firstly, economic development is downsized to potential GDP per

labour unit,³ an analytical simplification especially convenient for quantitative research but highly misleading with respect to what stands behind sustainable life quality, which is a more comprehensive notion of economic development.⁴ Secondly, there are four potential regional output *per* resident growth drivers only:

- Indigenous capital intensity endowment growth;
- Interregional production factor mobility;
- Intersectoral production factor mobility;
- Technological progress growth.

Thirdly, for many years, technological progress remained a black box serving to capture, in an exogenous manner, most economic growth explanations lying beyond the scope of individual decision-making. Finally, there is no role for territory-specific resource endowments, besides transport costs and interregional input mobility.

3.2 Conceptual evolution towards sustainable regional development

Interest on growth theory has reborn in the mid-eighties. Opening the neoclassical black box was a too tempting challenge to remain answerless for longer. Some research lines looked for enlightenment on technology itself, others dug on the role of interactions among economic agents. More recent rationales felt necessary to enlarge the study object to other dimensions of regional economic development because potential output growth itself, in these perspectives, is bounded by factors such as institutional density, entrepreneurship and social capital. In all these avenues, endogenisation of the “A factor” is the goal, *i.e.*, they are all striving to explain technological progress and its contribution to growth through the role of other variables. In doing so, more or less complex transmission mechanisms have been devised.

In the sequel, we offer a synthesis of what we believe to be the *state of the art* in terms of economic development driving forces understanding. Some forces are generated outside the territory, and can, therefore, be labelled as exogenous causes, while others are formed within the territory, thus having an endogenous nature.⁵ It is perhaps better to begin with the very notion of development whose evolution now encompasses the multidimensional concept of *life quality*. Everyone’s perception of

³ Output per head and output per labour unit move very closely in the short run. Under appropriate care, we can use one interpretation or the other.

⁴ The Nobel Prize winner Robert Lucas summarises the conformism of mainstream economists with the neoclassical vision of economic development: “By the problem of economic development I mean simply the problem of accounting for the observed pattern, across countries and across time, in levels and rates of growth of *per capita* income. This may seem too narrow a definition, and perhaps it is, but thinking about income patterns will necessarily involve us in thinking about many other aspects of societies too. So I would suggest that we withhold judgment on the scope of this definition until we have a clearer idea of where it leads us”—Lucas (1988, p. 3).

⁵ The “endogenous” adjective is used with a double sense in the literature. Sometimes, it refers to drivers within the territory; others it applies to causes external to the neoclassical formulation of labour and capital inputs in equation (1).

life quality depends on attributes such as individual levels of disposable income, education achievements, health condition or noise pollution but also on how these variables impact on the neighbouring community. These attributes are intrinsically place-based and the values that matter for an individual's life quality are those observed where she lives or works most of the time. So economic development is necessarily a territorial concept and is deeply linked to the sustainability of three elements: consumption patterns, environment use and social cohesion. The former sustainability stems directly from the budget constraint. If a household spends more than it earns for a number of years, inevitably one day it will have to cut down the consumption pattern so as to pay debt back and this adjustment will certainly hurt its life quality perception. The same fate applies to collective consumption. The unfeasibility of a particular consumption pattern comes to surface faster during hard credit market times. This leads us to the second sustainability concept. All societies appraise, albeit differently among themselves or across time, the preservation of a certain intergenerational equity in the fruition of natural resources, which imposes a sustainability constraint on Nature's use. Finally, no feasible process of life quality improvement should induce systematic social exclusion above what may be regarded as the tolerable ceiling. History is full of social disruption examples, often with violent consequences, triggered by serious income distribution aggravation within a given community, notably with respect to individual enhancement opportunities. This is why it makes sense to realise life quality as *sustainable regional development* (SRD).⁶

3.3 A state of the art synthesis

Our starting point to explain the causes of SRD is Stimson *et al.* (2011, pp. 10–11), where one category of neoclassical inputs and four categories of endogenous development inputs are lined up to explain the target variable, SRD. The categories correspond to the regional endowment of particular forms of capital resource, as follows:

1. Productive Capital (PC) endowment—clusters the explanatory capacity of the neoclassical production function without the A residual. It amounts to the efficient contribution of physical labour and capital endowments for potential output;
2. Human Capital (HC) endowment—corresponds to the labour input quality available in the territory under scrutiny. This quality is higher the better are formal education, professional training, workplace learning, and horizontal skills, such as information technology familiarity and social responsibility. It can be realised as a device that improves the productivity of a given physical labour input endowment and modelled as a multiplying scaling factor. A balanced human capital distribution across individuals is better than an asymmetric one because social interactions matter in the transmission of HC impulses to SRD;
3. Social Capital (SC) endowment—comprises the intensity of communication and interaction among resident people, their social-economic ties, formal and informal solidarity systems,

⁶ This triple sustainability definition of economic development and its territorial attachment are by no means original. See, for example, Stimson and Stough (2009, Ch. 2).

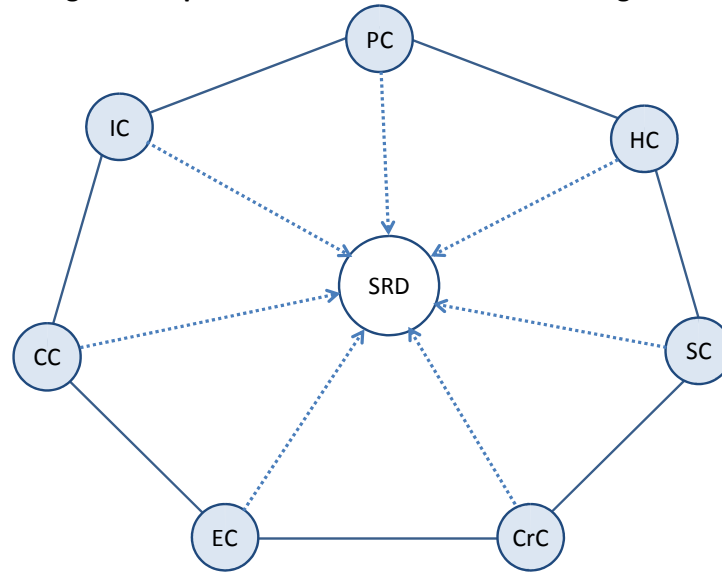
trust-based relationships, willingness to cooperate with others, formal and informal economic agent cooperation networks, etc.;

4. Creative Capital (CrC) endowment—captures the territory's response capacity to challenges and opportunities and is built up on proactivity, entrepreneurial capacity, mind plasticity to find new ways of thinking or to adopt new playing methods, innovative knowledge, ability to define new artistic trends or to anticipate future consumption patterns, etc.. Urban multiculturalism favours the diffusion of this input;
5. Ecological Capital (EC) endowment—stems from the availability of local environmental amenities that make more pleasant to live or work in that place: green spaces, fresh air, plenty water, nice landscapes, etc..

In our view, there are two missing categories of endogenous resources in the above list: cultural capital and institutional capital. So, we enlarge the list in this fashion:

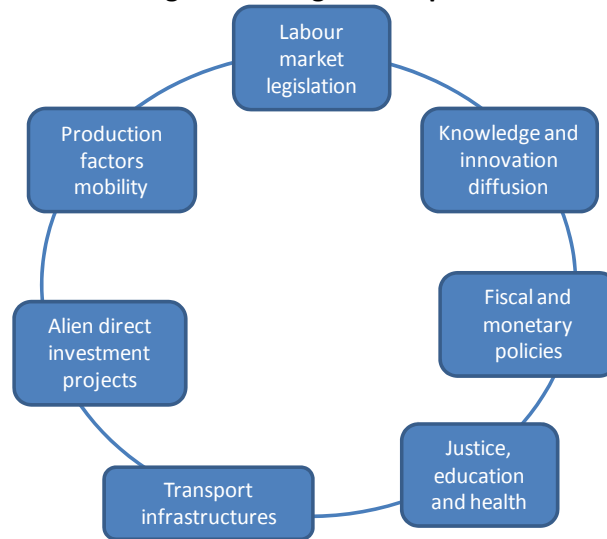
6. Cultural Capital (CC) endowment—as with ecological capital, the presence of material and immaterial cultural assets is a source of residents and visitors attraction as well as of creative energy. We are referring to historical built heritage (civilian, military, religious) but also to works of art (books, sculpture, painting), performing arts and traditional knowledge. Some cultural elements are so unique, barely replicable elsewhere in the long run and suitable to leverage business and job chains that they are at the base of the Collective Efficiency Strategy variety for low population density territories (the PROVERE initiative, to be introduced in Subsection 6.5);
7. Institutional Capital (IC) endowment—Amounts to the density and quality of private, public and social organisations in the territory. The complexity of professional tasks requires appropriate framing institutions inasmuch as institutionalism is more effective than individualism to provide services for others. Naturally, governance models and installed technical capacities matter to set the level of available IC in a particular place.

Under the shape of a heptagon, Figure 1 provides an interesting picture of the influence that factors endogenous to the territory have on its sustainable development. The continuous lines joining the factors represent interactions among them; dotted arrows depict the effect each factor has on SRD.

Figure 1—Endogenous inputs contributions to sustainable regional development

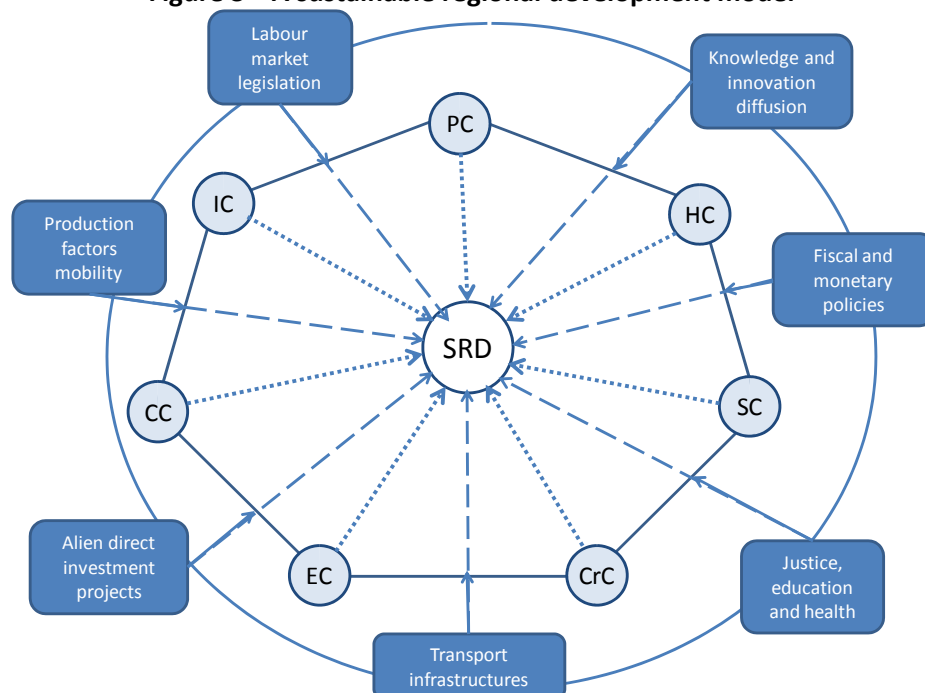
Interaction between the different capital types (heptagon vertices) may trigger comparative advantages, backward and forward interindustrial links, transport costs, and scale, agglomeration and network externalities. All these interactive effects impact upon the target (SRD) with more or less intensity according to the case in hands. From an institutional viewpoint, endogenous regional development processes have a matrix nature. Effective combinations of different capital types require sound cooperation solutions, at both the horizontal and vertical levels. The former involve cooperation within each category of economic players (firms, municipalities, ministries) and the latter between agents of different categories.

The SRD explanation is not complete without accounting for the influence of factors exogenous to the territory. Indeed, many life quality indicators in a given place reflect conditions from variables determined elsewhere upon which resident players have little control, if any. Examples include labour market legislation, knowledge and innovation diffusion mechanisms, macroeconomic policies stance, effectiveness of large social systems such as justice, education and health care, road network, volume and quality of direct investment projects undertaken by non-resident agents and the interregional and intersectoral mobility degrees of neoclassical production factors (labour and capital). There are, of course, interactions between these external impulses (e.g., the effect of the fiscal policy orientation on health system performance), which leads us to join them by continuous arcs in Figure 2.

Figure 2—Exogenous inputs

These interactions may develop favourable or unfavourable features in the demand for exports as well as in scale, agglomeration and network externalities outside the concerned territory with a larger or smaller impact on SRD, according to the arguments that usually explain these drivers—see Baleiras (2011, pp. 34–45) for details.

Finally, we put together in Figure 3 the two SRD explanatory blocks. The exogenous factors block impacts upon SRD via two channels: directly on the territory's life quality indicators, which is displayed by the dashed arrows, and indirectly through effects mediated by endogenous factors, represented by the continuous arrows. This figure is a possible illustration of today's *state of the art* in economic development theory. Its lessons apply to metropolitan as well as to rural areas, they concern developed as well as developing countries.

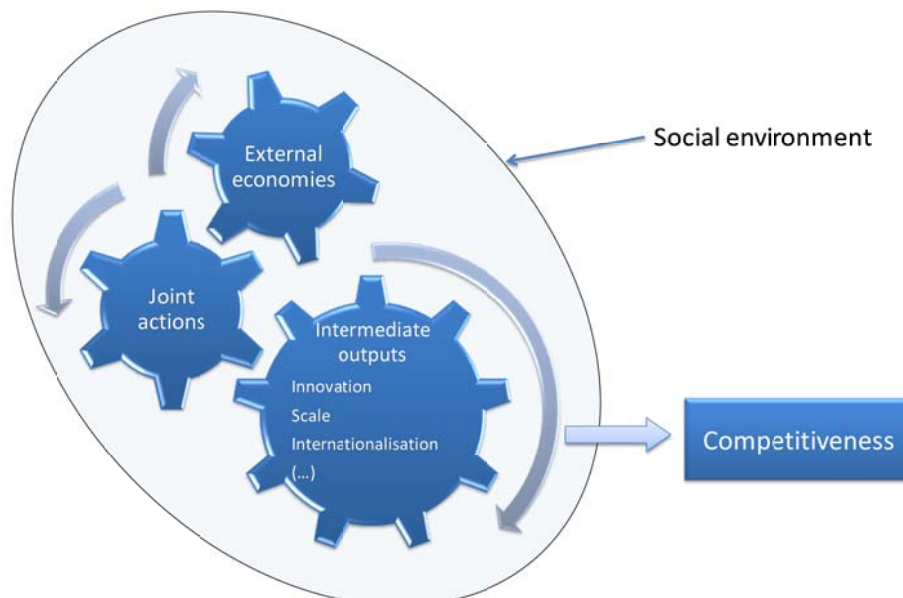
Figure 3—A sustainable regional development model

4 The collective efficiency concept

As we mentioned in the introduction, the collective efficiency notion lies at heart of the new family of policy instruments to be presented later in this paper. Although originally sculpted to explain the success of particular business clusters in developing countries, the idea is definitely part of the endogenous regional development heritage and contains useful hints for territories facing the kind of problems described in Section 2. It was coined and extensively justified by Schmitz (1999). Here we will simply focus on the insights necessary to rationalise the policy instruments and offer a useful generalisation for policy purposes.

Collective efficiency makes use of two important structural factors that impact upon growth and development improvement. These factors are *external economies* and *joint actions* by economic agents. Properly combined, they produce “collective efficiency”, which is a source of individual and group competitiveness as we will discuss shortly. In what follows, we will be concerned essentially with one goal only, territorial competitiveness. Figure 4 illustrates the argument. The social environment, defined as the set of social relations between economic agents, is the playing field where collective efficiency emerges to trigger positive effects on variables such as innovation, scale, and internationalisation. Improvements in these variables ultimately lead to competitiveness enhancements. We are therefore reasoning in the context of endogenous development factors. External economies and joint actions emerge in the region from the interaction between the seven endogenous inputs along the heptagon sides of the sustainable regional development model.

Figure 4—The transmission mechanism of collective efficiency



4.1 An illustration

Let us sketch a hypothetical situation to realise the potential of collective efficiency. A skilled shirt maker, endowed with enough financial capital and good contacts with prospective customers, is choosing where to locate her first plant. After carefully considering different alternatives, Josephine

Costa selects a land plot in the Ave Valley (North of Portugal), close to other firms in the textile industry, some as small as hers, others larger. There are already other shirt makers in the vicinity. This means she has figured out the risks of competition for suppliers and customers; being closer to competitors, her profit margin *per* output unit may be smaller than in an isolated location. Yet, this proximity with direct competitors as well as with firms specialised in other stages of the textile value chain, offers Costa some advantages. Firstly, there are hundreds of specialised textile workers in the Ave Valley and so the training costs here are considerably lower than in an isolated location. Secondly, tens of other end-product makers share the same few specialised producers of intermediate inputs, such as button makers, located in the Ave Valley as well. The proximity to suppliers facilitates face-to-face contacts, an important feature at least in the early stages of product development. As long as increasing returns to scale exist in the production of these inputs, supply sharing is an efficient device for a small buyer as Costa to reach the cost benefit of scale economies which normally are only available to large shirt producers. Thirdly, Costa is aware of the value of information for her business, particularly the information regarding technological developments. In an industrial district, information circulates easily, there are even many informal channels (coffee shops, coiffeur saloons and other places where workers and entrepreneurs socialise) that prove effective to know what is around. Appraised together, these advantages reduce the risk of business failure and facilitate the access to a larger pool of suppliers and customers when compared to isolated locations.

4.2 Agglomeration economies

In the illustration above, we have laid down the three classic positive externalities associated with firm agglomeration (also known as *agglomeration economies*): labour market pooling, scale economies in the production of intermediate inputs and information economies. You can read more about them in an urban economics textbook.⁷ Actually, their acknowledgment in the economics literature goes back to Alfred Marshall, one of the parents of neoclassical economics. In his much acclaimed 1890 *The Principles of Economics* textbook, Marshall coins the concept of *external economies* to express the benefits an individual firm reaps from “the general development of the industry”.⁸ We can express this idea formally. Let Costa be firm i in industry j (textile). Suppose there are H textile firms in the Ave Valley. Costa’s production cost, c_{ij} , is a function of her own output, y_{ij} , and the aggregate

⁷ O’Sullivan (2009, Chs 3 and 4) is an excellent source to deepen this matter.

⁸ Quotation from the eighth edition, Marshall (1920): Book IV, Ch. IX, par. 25. Interestingly, he introduced the notion of external economies to explain why firms of a particular industry may be interested to cluster. Attention to clusters or industrial districts, to use Marshall’s own expression, was also an innovative idea at that time. Though intellectually appealing, both the external economies concept and even more the industrial districts idea remained rarely used by mainstream economists for decades. Porter (1990) and subsequent works rediscovered the industrial district idea, refined it to allow for the simultaneous presence of closely related activity sectors and popularised it under the term “cluster”. In what follows, we will use the expressions “cluster” and “industrial district” indistinctly because their difference is inconsequential for our purposes. Krugman (1995) played a significant role to revive the external economy argument and provides a justification for its long general dismissal in the economics profession. Clusters and external economies (agglomeration economies) are now widely employed in economic models and discussions.

output produced by all other firms in industry j , $\sum_h y_{hj}$ for $h=1, \dots, H$ and $h \neq i$. In other words, Costa's cost function is

$$c_{ij} = c \left(y_{ij}, \sum_{\substack{h=1 \\ h \neq i}}^H y_{hj} \right), \quad (3)$$

where we have omitted input prices for simplicity. The marginal cost of own output is positive, as usual, but the marginal cost with respect to the others' output is negative, $\delta c_{ij} / \delta \sum_{h \neq i} y_{hj} < 0$. This latter derivative reflects the presence of agglomeration economies, *i.e.*, the benefits to Costa's firm from locating in the Ave Valley industrial district.⁹ By a symmetry argument, note that the other firms in the cluster also benefit with Costa's arrival in the territory. The larger the number of newcomers, the larger the cluster, and so, for each incumbent firm, the larger are the benefits from labour market pooling, scale economies in intermediate goods production and information diffusion. Hence, the smaller becomes each incumbent firm's cost for any individual output level.

4.3 Joint actions

Please note that these external effects arise from location sharing without explicit interaction between players. Costa neither asked permission to settle in nor did she entered into any agreement to benefit from cluster spillovers or to grant external benefits to any particular incumbent. Agglomeration economies are a persuasive factor to explain firm clustering, yet they are not sufficient to explain why some clusters grow and eventually go international while others stagnate or even shrink after a while. There is abundant empirical evidence on successful and faded industrial districts—see, for instance, Chs 25 to 49 in Becattini *et al.* (2009) and the references therein. Schmitz (1999) discusses this issue extensively and offers an insightful rationale. He claims that *joint actions* undertaken by members of the district, on top of agglomeration economies, are what makes the difference in terms of competitiveness success. These are *deliberate actions consciously and explicitly agreed* among cluster members to achieve efficiency gains for them. They can be an agreement between four small shirt makers to divide a single large order, a research centre set up by a pool of shirt and fabric makers to develop new textile products or the co-ordinated presence of the industrial district in an international business exhibition. Table 2 summarises the forms joint actions may take. The keyword here is *cooperation*. Joint actions are the outcome of cooperation between cluster members. Co-operation may involve competitors only (horizontal cooperation) or the junction of deliberate and coordinated actions by input producers and users or output producers and buyers (vertical cooperation). You should bear in mind that cooperation does not preclude competition between

⁹ Readers familiar with urban economics will recognise these agglomeration economies as the *localisation* ones. If the cluster combines firms from other industries, it is appropriate to account also for a second variety of agglomeration externalities: the so-called *urbanisation economies*. They are captured by the negative partial derivative of the cost function with respect to total complementary output, or $\delta c_{ij} / \delta \sum_{h \neq i} \sum_j y_{hj} < 0$.

members. Based on facts accounted for in the empirical literature, we may conclude that competitive clusters are those that succeed to combine cooperation with rivalry.

Table 2—Forms of joint actions in clusters

	Bilateral	Multilateral
Horizontal	e.g. Sharing equipment	e.g. Sectoral Association
Vertical	e.g. Producer and user improving components	e.g. Alliance across value added chain

Source: Schmitz (1999).

4.4 Collective efficiency and competitive advantage

External economies (of agglomeration) are a necessary and sufficient condition to clustering but are not enough to justify the subsequent achievement of clustered firms, notably their growth and winning path in globalised export markets. This is so because external economies are involuntary. The positive impact on one firm's profit from the localisation decision of another "is not a deliberate action but an unintended or incidental by-product of some otherwise legitimate activity"—Schmitz (1999). Joint actions, by contrast, are the outcome of consciously coordinated behaviours to attain collective benefits. These actions pursue some form of public good provision to the club (cluster) members—e.g. common branding, machine hours sharing, trained workers, business mission to foreign markets...¹⁰ Empirical evidence from many cases in both developed and developing countries supports the conviction that the chances for growth and competitiveness of enterprise clusters are brighter the more deliberate and pro-active joint actions are pursued. Therefore, following Schmitz, we define *collective efficiency* "as the competitive advantage derived from agglomeration economies and joint actions".

This statement echoes back in the economist's toolkit to remember the three sources of territorial competitiveness advantage (or efficiency) trade theory tells us: first, productivity differences at the firm level under linear technologies (*ricardian* theory); second, relative factor abundance differences under constant returns to scale (Heckscher-Ohlin-Samuelson theory); third, increasing returns to scale (also known as scale economies *internal* to the firm) under product differentiation (Krugman theory). Collective efficiency can thus be presented as a fourth source of comparative advantage for clustered firms (or industrial districts/territories): joint actions under external economies in an industrial district. In all four cases, there is a distinctive feature triggering a lower output price and, therefore, a competitive advantage.

4.5 Generalisations of the collective efficiency concept

We now give a step further to enter more explicitly the regional development arena. Schmitz has developed his concept of collective efficiency considering one category only of economic agents: firms. However, other types of players behave in real-world clusters and coordinated actions across agent types can activate benefits for all as well. For example, local governments can be useful part-

¹⁰ These goods feature non-rivalry in consumption (that is why they can be labelled *public*) although access may be restrained and self-opting out may apply.

ners to help firms to grow and compete if public money follows private action. This can be the case of a partnership between the enterprises association and a municipality to build and run an exhibitions facility. The municipality may pay for the land use and the firms for the building and operation costs. This facility may help to diffuse internationally the competences of the territory, to incubate new firms and to house a technological development centre. Another interesting kind of players is a research centre or a higher education unit. Appropriate, tailor made contracts with some or all clustered firms can be an effective way to transfer knowledge into mercantile goods and leverage a sustained inflow of innovation to clustered firms. We think it is appropriate to speak of collective efficiency as well when *multi-institutional cooperation* is in place.

A second generalisation of this concept comes to mind when we think of the increasing number of transactions carried out before computer screens. For many activities, information and communication technologies provide efficient proxies for face-to-face contacts. Going back to our earlier textile example, frequent electronic interactions, combined with just a few face contacts from time to time, are a cheap and yet higher quality device to discuss ideas and experiment new product solutions between shirt, button and fabric makers. Orders can be placed by e-mail, training can be offered remotely, labour search can be performed through databases. This means that basically the same kind of benefits allowed by agglomeration can be offered by effective *network cooperation*. Network cooperation does not need physical proximity of players but requires explicit, deliberate joint actions among partners. Contrary to agglomerations, in this case external effects (which we may label as *network externalities*) do not exist without joint actions, they result from the latter. Appropriate competitiveness-oriented joint actions can indeed generate a price advantage for networkers, thus qualifying them as another form of collective efficiency.

To conclude this theoretical section, we come back to Figure 4. Occurrence of joint actions requires social interaction. The effectiveness of joint actions as a business efficiency device depends a lot on the *quality of the social environment*, i.e., on the seven endogenous capital endowments and their interactions. Trust, sharing traditions, entrepreneurship spirit, firm density, strength of community institutions are important ingredients to *manufacture* effective collective efficiency. These elements are not uniformly distributed and clusters are very unlike in terms of their composition. Although the Ave Valley is an industrial district example, cooperation among residents—including firms, municipalities, universities, public and private professional training centres, etc.—is not as strong as in other cases, which may explain the difficulties the textile industry has undergone there over the last 15 years and the relative success in other European districts where social capital has been better equipped for joint actions for a longer time.¹¹

¹¹ See Baleiras (2011a) for a metaphoric yet realistic comparison between the Ave Valley and Treviso (north of Italy) textile districts. Forty years ago both territories comprised very similar firm structures (family-run small clustered businesses). Individualistic tradition in the former case and strong cooperation links in the latter account significantly for the different collective performances until nowadays. Cooperation in the Portuguese case has improved substantially in recent years but History still makes the difference.

5 From economics to policy-making

Before switching from the theoretical survey to actual policy drafting, a few caveats apply about the limitations of public action and the empirical ground our instruments are expected to step in.

5.1 Caveats

A word of caution comes to mind before advocating government intervention in the economy. As with other forms of externalities, economies of agglomeration are likely to lead to market failure, *i.e.*, to resource allocations that do not maximise social welfare. Economic agents who cause the benefit to others and are not compensated for it may soon reduce their effort to a (social) suboptimal level. This raises the temptation, so often in political speeches about the economy, of calling for government intervention. However, care is required before making such call. Firstly, note that joint actions may be an excellent device civil society has to internalise those external effects and put the economy in a Pareto-track towards efficiency. Examples such as an exhibition of cluster competences, a partnership with a university to run a technological centre, a booking central covering tens of nature tourism lodging units can effectively promote positive sum games without public intervention. Secondly, when we realise the development potential of a cluster or network, we immediately conclude that the most useful public action is not necessarily subsidisation or any form of tax relief. The role of collective efficiency as an effective development leverage is stronger the more cohesive and self-governed the partnership of agents is. In many cases, particularly when the initial conditions are weak, the wisest public action is the stimulation of social capital, *i.e.*, helping economic agents to know each other, identify common objectives, draw a feasible strategy to extract value from their resources and organise themselves with a good governance model. These warnings were considered seriously when drafting the Collective Efficiency Strategy instruments.

The cooperation resource, or collective efficiency if you now prefer a more scientific terminology, is precisely among the most precious ones available to small agents committed to win in the global economy. Through judiciously undertaken joint actions, the efficiency outcomes typical of larger and more mature agents become also reachable to them. In fact, many activities parallel to physical production are nowadays very important sources of competitive advantage, such as branding, R&D and market intelligence. These activities frame the core business and command deep pockets because of the substantial fixed costs that are typically involved. Very often, these costs are a barrier to entry of SMEs in the global market, particularly those based in small economies. Smart use of collective efficiency can help small-sized agents a lot to share those fixed costs and overcome the market barriers associated to their individual size. This idea lied at the heart of the policy tools whose design is discussed below.

5.2 Competitive vulnerabilities and collective efficiency

So, collective efficiency can help a lot to make the difference in the delivery of welfare gains from trade. The Portuguese government identified four domains of *competitive vulnerability* where effec-

tive collective action is expected to make a significant contribution: knowledge market, productive internationalisation, urban regeneration and low density territories. The following paragraphs will elaborate a little on each of these vulnerability domains. Collective Efficiency Strategies were devised to help mitigating such weaknesses which, we think, are also found in other geographies. This is another reason why the toolkit is transportable to other competitive vulnerabilities via judicious customisation.

Firstly, the link between knowledge production and knowledge trading use is a prosperity source clearly underexplored in Portugal. For a long time, universities or research centres, on the one hand, and the business community, on the other, have ignored each other's common interest to cooperate in joint Research and Technology Development (R&TD) projects. Traditional public support to research, anchored on subsidies to individuals (such as doctoral scholarships) or single institutions (public laboratories and firms), seemed to ignore this deficiency. New national priorities for structural funds in the 2007/2015 implementation period led to the creation of specific instruments to help creating this market, putting together for the first time individual research centres and small firms: the *innovation cheque* and the *R&TD cheque*. Yet, much more could be done to fully utilise the substantial increase in the number of fulltime researchers over the last 20 years and the accumulated experience of individual firms in business areas where key resources are relatively abundant in Portugal (renewable energies, maritime activities, health, wine, furniture and information & communication technologies, to mention a few well-known examples of business success). Bringing together players in various sectors to innovate, export and qualify jobs was, therefore, a challenge for collective efficiency.

Secondly, as evidenced in Section 2 above, the last decade brought very modest GDP growth as a result of competitive losses from structural handicaps. Many observers have blamed the business community for delaying too much the necessary adjustments to a changing trade environment and the authorities for complacency with that behaviour, if not for their active promotion of sluggish transformation. From a long term economic perspective, it is sad to acknowledge that resources have moved too much away from tradable activities into domestic uses defended from international competition. The funding difficulties the Portuguese economy is going through during the euro zone financial turmoil of 2010 and 2011 are a clear indication of the excessive private and public indebtedness. The competitiveness weaknesses we have pointed out throughout this article obviously aggravate the economic rebalancing. Therefore, a resolute bet on the internationalisation of resident economic activities is a must. This means more competition at home and abroad for domestic firms, market enlargement for inland activities (visitation) and exports, joint ventures abroad. Collective efficiency can also play a decisive role to help Portuguese agents to win the internationalisation challenge.

Thirdly, urban economists have long stressed the economic importance of urban areas. In developed countries, between 65 and 80% of total population lives in urban territories¹² and cities probably account for an even larger share of jobs and output.¹³ We can think of cities as large multi-institutional, multi-industrial districts. Indeed, urban territories concentrate a considerable number of workers and consumers, as well as firms, civic organisations, public agencies, infrastructure and collective facilities affiliated with many different activity sectors. Not surprisingly, cities are great places to create and innovate due to the intense social interactions available (high endowments of CrC and CC). Trading and shopping opportunities also abound because transport costs for both buyers and suppliers are smaller than in rural areas. Higher density rates typical of urban areas facilitate infrastructure provision due to smaller fixed costs *per capita*. However, cities also house considerable problems. Pollution, crime, congestion, poverty are, for sure, more serious there than elsewhere. Cities matter for their economic development as well as for the prosperity of rural areas which they influence. The links between the two may be friendly or unfriendly for their mutual development as core-periphery models predict.¹⁴

A comprehensive policy approach to regional development cannot dispense a look at urban tools. A first consideration goes to individual urban agglomerations. As in many European countries, Portuguese cities need systemic and integrated regeneration operations, particularly at historic centres and *brownfields*. These operations involve public space interventions but also the renewal of private property, including land use changes. The isolated investment of a private landlord on a degraded neighbourhood will be much less profitable for him than if his action is undertaken simultaneously with tens or even hundreds of investment actions by other owners and the local authorities. Isolated, individual actions naturally will also tend to be suboptimal from a social viewpoint because of the considerable externalities involved. Hence, partnership agreements among relevant private and public agents and along the collective efficiency rationale can prove very useful to internalise those spill-overs and promote cost-efficient urban regenerations, rendering cities much better places to live and work in. A second consideration involves networks of cities and their *hinterlands*. It makes sense to put collective efficiency at work in the case of a few urban agglomerations that share a comparative advantage in a particular sector. Take the case of aeronautic industry. One city may offer a good higher education programme on the field, another may house a couple of plane components manufacturing plants, a third one a flight school. Conditioned on serious strategic planning and commitment of relevant players, it may make sense to develop a collective strategy to compete at a higher level combining judiciously rivalry with cooperation within the partnership of key players from the set of cities.

¹² See urban development indicators in World Bank (2011).

¹³ As a matter of example, a single metropolitan area in OECD countries may house up to 50% of national GDP. The metropolitan areas of “Budapest, Seoul, Copenhagen, Dublin, Helsinki, Randstad-Holland and Brussels concentrate nearly half of their national GDP whilst Oslo, Auckland, Prague, London, Stockholm, Tokyo, and Paris account for around one third.”—OECD (2006).

¹⁴ We are thinking of the growth pole school in the fifties of the 20th century—of which François Perroux’s works collected in Perroux (1964) were probably the most influential—and the current geographical economics models in the line of Fujita *et al.* (1999).

Last but not least, we addressed the economic fragility of low density territories. Many predominantly rural spaces round the world face a serious economic and political problem: a long, vicious circle of relative, if not absolute, impoverishing development. Distant from dynamic urban centres, they are losing active individuals, ageing their population stock, lacking entrepreneurial initiative, featuring thin institutional fabrics, missing consumers, failing to attract direct investment, destroying jobs, which reinforces population losses and closes the declining circle. Yet, many of these territories also house extremely valuable singular assets largely underutilised, such as breathtaking natural parks, impressive humanised landscapes, remarkable historical heritage, astonishing immaterial cultural values or highly appraised gourmet *terroir* products. By working out properly the interactions among endogenous and exogenous inputs (recall Figure 3), these assets can serve as the foundation for a collective dynamics of mercantile valuation to break that circle in and inflow virtuous elements. Again, collective efficiency provides the key to activate those interactions. Bringing together a coherent array of private and public agents to structure a sustainable business and job chain around the relatively unique territorial asset is the driving idea behind Collective Efficiency Strategy tools for rural economies with that kind of competitive vulnerability. Next sections spell out how.

6 Collective Efficiency Strategies: a regional development policy instruments family

In all four cases described in Subsection 5.2, there are competitiveness vulnerabilities, available social capital and extensive non-internalised external effects. Therefore, one major concern of regional development policy in the 2005/2009 period had been to push economic agents for win-win strategies of collective efficiency: victory of the individual player and victory of the partnership of players. The government placed itself as a cooperation facilitator and launched calls for the emergence of voluntary consortia of development actors.

6.1 A bird's eye view

This policy initiative has a label: *Collective Efficiency Strategies* (CES). After the throughout theoretical digression in Sections 3 and 4 and the empirical motivation of Section 5, we think the name is quite informative about the purpose of this regional development policy instrument. A CES is a coherent and strategically justified set of material and immaterial initiatives that

- are integrated in an action programme;
- head for innovation, qualification or modernisation of a constellation of firms with national, regional or local implantation;
- trigger, in a structured manner, the appearance of economies of agglomeration and deliberate joint actions, including network externalities, among firms on the one side, and firms and other players relevant to develop their activity sectors and the territories where they locate, on the other.

The methodology combines *top-down* political orientations with *bottom-up* partnership inputs. The authorities set up the rules of the game after a careful planning exercise, including hearing the voice of potential field players. Then, it is up to development actors to decide with whom to cooperate, what for, which strategy to follow, which actions to undertake, which own resources to use, and how to self-govern the partnership.

The government's role combined a strong political commitment to design the rules, coaching players and encouraging their move towards planning and action, with a soft fiscal intervention. As in most countries, there was in Portugal a long practice with public subsidies to structural actions by individual players (firms, municipalities, research centres, etc.). The fiscal component of the CES Initiative is a positive discrimination in favour of collective structural actions. If players succeed in putting together an economically sound, strategically founded action programme that creates and internalises positive spillovers, they are encouraged to move forward with a fiscal carrot: they may get a higher grant rate or a higher ceiling cap on their individual projects vis-à-vis an alternative situation where similar projects eligible to public funding were put forward on an individualistic basis, totally independent of each other. If public finances get more constrained, the fiscal stimulus may acquire a more cost-effective format. For example, let the general rule be zero grants for private or municipal projects and the discrimination a subsidy only large enough to compensate players for the additional cost of bargaining and setting a collective action programme. Another interesting carrot a government may wish to add to a CES package is the facilitation of licensing procedures required to implement action programmes. The idea is to speed-up administrative procedures, while keeping the same legal obligations applying to the society at large, so as to help each consortium to meet their planned schedule and the ideal project sequencing.

The kind of competitive vulnerabilities identified by the Portuguese government led the CES Initiative in this country to take the family form of four closely related policy instruments:

- a) Competitiveness and Technology Poles (Portuguese acronym; PCT);
- b) Other Clusters (*idem*: OC);
- c) Urban Regeneration and Development Actions (*idem*: ARDU);
- d) Programmes for the Economic Enhancement of Endogenous Resources (*idem*: PROVERE).

Each family member addresses a particular need for collective efficiency. Together, the whole family hopes to make a significant contribution to overcome the four domains of competitiveness vulnerability presented in Subsection 5.2. Of course, applications in other countries may wish to tackle different domains. PCT and OC are mainly concerned with knowledge market and productive internationalisation, ARDU with urban regeneration and productive internationalisation and PROVERE with low density territories and internationalisation, especially in terms of visitation, whenever applicable. The following subsections will explain a little bit what each member is about.¹⁵

¹⁵ They are based on the CES legal framework definitions, NSRF (2208).

6.2 Competitiveness and Technology Poles (PCT)

PCT are an instrument to seduce innovative network setting in technology-intensive sectors with a strong orientation towards global markets.

Each pole is a partnership comprising firms and support institutions, notably R&TD, higher education and professional training units. Partners share a strategic view based on innovative activities or heading for innovative outputs, with significant knowledge contents, and are clearly committed with an international market orientation. A compulsory feature of the partnership must be its complementary structure. Contributions by one member are expected to stimulate contributions by others around a core of corporate activities with national implantation, high technological intensity and sound demand perspectives.

The pole should have or should create the required critical mass to achieve its global projection. The pole's innovative environment should induce members' insertion in worldwide knowledge networks or business-based chain values and the attraction of structuring direct foreign investment and top-quality human talent to Portuguese territories.

The strategy, the self-governance model, and the projects described in the action programme must be coherent with public policies goals and instruments. Moreover, they should aim to brand internationally the technological capacity of Portugal and able to work as territorial marketing elements.

As explained in the following section, the rules of the game comprise a competitive process to select which applications will be awarded the recognition as PCT type of CES and the corresponding set of duties and rights. To exemplify, in Portugal there are recognised PCT in the following sectors: health, fashion, energy, mobility industries and information & communication technologies.

6.3 Other Clusters (OC)

Firms and regional support institutions, sharing a strategic vision for the development of a particular economic activity sector in a given territory, getting together to implement a common action programme, can be recognised as an "Other Cluster" (OC) type of CES. Contrary to the PCT type, an OC must comprise a close tie between territory and sector and does not need to focus extensively on R&TD activities. The geographical coverage of the partnership is not necessarily national; indeed it is expected to be narrower. Here, the focus is on the traditional *industrial district* concept where physical presence and business chain value of closely-related activity sectors are the driving agglomerative forces to explore.

To be considered for public encouragement, members must show their willingness to embark on technological, commercial or organisational changing processes able to boost the sector's or the territory's competitiveness. Their strategy, governance model and projects must be focused on specific areas, critical to set a sustainable cluster, a cluster effective at running joint actions and delivering positive externalities with significant territorial and sectoral impact. The size and internal diversity

of the cluster must be large enough to enable the development of durable innovative projects on a regular basis. It should also set the right conditions to orient firms towards international markets.

As examples, consider some of the winner applications in the 2009 Portuguese contest: wine cluster of the demarcated Douro region, North region creative industries cluster, natural stone cluster and the sustainable habitat cluster.

6.4 Urban Regeneration and Development Actions (ARDU)

The government may recognise as an ARDU type of CES a local-based integrated urban development plan with business projects whose aims are either:

- Requalification or renewal of trade and service activities located in areas covered by an integrated urban rehabilitation or revitalization programme;
- Creation of new innovative and creative economic activities;
- Or Relocation of economic activities to socially more convenient business hosting areas.

An ARDU partnership must involve firms and municipalities (as compulsory members) and possibly business associations and other agents relevant for urban development. The partnership has to be part of an underlying integrated urban development programme led by the municipality (or collection of municipalities) fitting within the country's urban policy framework. In the Portuguese case, such programme needs to be approved as a local application of the *Urban Regeneration Partnerships* instrument or as multi-city implementation of the *Urban Networks for Competitiveness and Innovation* instrument. In both cases, the idea is to bring together, in a coordinated way, public and private interventions with the aim of reinforcing the economic attractiveness of cities as places to work and reside.

6.5 Programmes for the Economic Enhancement of Endogenous Resources (PROVERE)

The PROVERE type of CES addresses economic geographies featuring low population densities with structural relative impoverishment circles as described at the end of Subsection 5.2. In the Portuguese case, to illustrate, 61% of the mainland territory has less than 46 inhabitants *per km²* and house 1 million individuals, *i.e.*, 10.8% only of total population. The (unweighted) *per capita* purchasing power mean in municipalities comprised in that definition amounts to just 64% of the national average (2008 data).¹⁶

In general, such territories do not house enough entrepreneurial and support units to qualify as a cluster. There may be firms from different economic sectors but with too many holes in the business value chains. Very often, the entrepreneurial spirit is weak and the institutional fabric too thin. Yet,

¹⁶ These figures and a complete exposition about the PROVERE Initiative in Portugal can be found at Baleiras (2011c).

many territories have one or two distinguishing endogenous asset, hardly replicable in the long run, economically appraised by visitors or non-resident consumers. Take the case, for example, of an outstanding natural park, a breathtaking humanised landscape, a constellation of remarkable castles and palaces, a collection of traditional expertise so often linked to gourmet agro-industrial, handicraft and other *terroir* products. These tangible or intangible assets portray unique features that prevent their imitation elsewhere in the foreseeable future. Many people in rural and urban areas derive utility out of these resources and are willing to pay for them, either by making visitations to and promenades through such places or buying remotely goods and services produced out of those special resources. If that is so, it makes sense to work out a collective strategy to extract economic value from these endogenous resources mainly to the benefit of residents in their vicinities. It may pay off to congregate the interests of tens of firms and non-profitable organisations (social and public sectors) around an action programme anchored on one or two endogenous resources and headed for business delivery and the attraction of visitors and additional enterprises. The call to collective efficiency makes sense here. *Ceteris paribus*, both the private and the social productivity of an euro of investment is higher when such decision is coordinated with many other players' actions than when that euro is just a one-agent's isolated investment.

An example helps to clarify the PROVERE typology. From 1850's to 1960, Portugal's most impressive mining adventure took place at Mina de São Domingos (Mértola "concelho"), nearly 80 km north of the Algarve coast line and 20 kms east of the Spanish border. Ruins and (contained) acid water lagoons spread over many hectares. Beja's new international airport and the rising touristic resort destination along the Alqueva lake lie at 1h and 1h30m distance, respectively. Suppose a firm sets there a thematic leisure park devoted to the mining memory. Another firm opens a touristic river cruise route between the cosmopolitan Algarve harbours and Pomarão dock (at the edge of Mina de São Domingos' territory). The thematic park benefits the cruise firm by offering a new touristic product that enriches the navigation experience and cruise boats favour the thematic park with regular customer inflows. The same could be said about the complementarities with Alqueva resorts. Mértola municipality could also help to leverage this partnership by building and operating a *blue flag* river beach close to a charm hotel ran by another company. A regional development agency mobilises tens of traditional pork and handicraft products to enter into touristic package agreements, combining also bird watching and radical sports activities operated by micro and small companies. Manor houses, nature and rural tourism lodging units along the 80 km Portuguese and Spanish banks of the Guadiana River will find a way to enter into those packages as well. This example illustrates how a coordinated array of private and public actions around a singular endogenous asset (the onsite mining memories) may be worked out to reverse the declining path of an aged low density area. An amateur video at <http://www.youtube.com/watch?v=pdbrsfBLEyE> and a Wikipedia page at

http://pt.wikipedia.org/wiki/Mina_de_S%C3%A3o_Domingos give you a flavour of what could be done to turn the example into reality.¹⁷

So a PROVERE CES application is a partnership of regional or local base institutions, such as firms (compulsory requirement), business associations, local governments, higher education units, regional development agencies and local development associations (*Leader* organisations).¹⁸ Its focus is on the unique endogenous asset rather than in a particular economic activity sector. Based on the collective efficiency rationale, members must set a strategy, a self-governance model and individual and joint activities aiming at enhancing the competitiveness of the target low-density territory around the singular endogenous asset(s). By mobilising adequately endogenous capital endowments, the implementation of their action programme is expected to reverse the territory's economic repulsiveness, which means valuing cultural and natural heritage, generating new activities, densifying the business fabric, among other things, leading ultimately to population retention and renewal.

Recognised PROVERE CES include endogenous assets as different as the Roman presence heritage at Terras de Sicó, the Upper Palaeolithic rock-art of the Côa valley, deactivated 19th century railway tracks in Alentejo, shale villages in Beira Interior or thermal water resources in Centro region.

7 The operational outline

The design and implementation of the CES tools of regional development policy, though not complex, hardly fits in the space of one section. Thus, we offer here just a barebone presentation of the operational details. The interested reader may find a comprehensive explanation in Baleiras (2011c) for the PROVERE type of CES.

7.1 Common features

For the sake of simplicity, the four CES types share a number of features:

- Formal partnership contract between members;
- Firms are the only playing category whose membership is compulsory (otherwise there would be no competitiveness enhancement goal in this policy);
- Members draft and implement an action programme;
- A sound development strategy backs up the action programme;
- There is a self-governance model;

¹⁷ Personal note: inspiration for CES policy tools came to the author's mind when he spent the 2006 Easter weekend in this spot. The beach and the hotel were already there but all other clustering activities are fictitious for expositional sake (and for how long?).

¹⁸ These associations have an important mobilising role in rural economies and, in the case of the EU, they are the pivotal elements of the *Leader* community programme for rural development.

- The action programme has a five-year lifetime but needs to install endogenous capacity so that the partnership may last longer on its own to sustain further clustering activities without public support;
- The action programme describes two kinds of structural action or investment: anchor and complementary projects;
- Anchor projects are key activities to deliver the collective strategy. They must have a direct and visible contribution to impact indicators. These projects may be individual but a few of them must correspond to a joint action, as defined in Subsection 4.3 (e.g., real assets sharing, such as infrastructure and other collective use facilities, and common interest technology development and transfer projects);
- Complementary projects are not essential for the strategy success but help to densify the inter-partner transactions and deepen the collective efficiency. They add social value to the anchor projects;
- Anchor and complementary projects receive different privileges upon the official recognition of the action programme (to be determined in each country according to available public resources and political preferences);
- Qualification for government encouragement requires strategic alignment with EU, national and regional development planning, as appropriate;
- Forms of government encouragement include technical coaching, accelerated licensing procedures and financial incentives;
- Government encouragement is conditional on a quality screening device and subject to a competitive selection procedure (see below).

7.2 Action programme

The formalisation of a CES partnership requires an *Action Programme* designed by the partners themselves. Public encouragement terms granted to any CES application is conditional upon approval on a specific competition to recognise individual action programmes as a Collective Efficiency Strategy. Details of the recognition process will be given below. So the action programme is the document that introduces a candidate partnership to the authorities in charge of the policy tool and, at the same time, engages all partners publicly with its implementation. Each document must include, at least, the following chapters:

- a) Diagnosis;
- b) Strategy and territorial, sectoral or technological focus;
- c) Scope and ends;
- d) Identification of endogenous capital endowments to mobilise;
- e) Governance model and leadership;
- f) Action and project files (description of anchor and complementary projects);
- g) Indicative demand for licensing requirements and public grant.

7.3 Public funding

There are two issues that need to be solved from the outset: how does the policy access to taxpayers' money? How is that money passed to partners? In many countries, regional development policy has a pocket of its own assigned by the general government budget and the former question is not relevant. The member of government in charge of that policy can decide how much to allocate from that pocket to the CES initiative. Yet, that is not always the case. For instance, in Portugal a Prime-Minister's decision ruled out the possibility of a dedicated financial endowment for the CES tools; money to pass to players would have to be raised on a competitive basis within the general framework of the country's *National Strategic Reference Framework* (NSRF).¹⁹ The latter issue above concerns the selectivity degree the government wants to impose on the CES initiative. We recommend a competitive allocation mechanism to both private and public partnership members, based on ex-ante and interim quality assessments. This mechanism should provide the right incentives for top quality action programmes to emerge and to keep members' commitment with targets delivery.

A third financial issue is the public incentive form. The concern here should be to compensate partners for the additional costs coordinated actions impose on individual members so as to make cooperation part of their best interests. The appropriate form varies with existing rules (industrial policy, intergovernmental transfers, etc.) for subsidising analogous uncoordinated individual projects and, therefore, each country must find the best solution to their case. In some cases, a few percentage points more in the subsidy rate may suffice, a dedicated grant ceiling in general calls for CES and non-CES investment projects may seem necessary in others, consideration of exclusive eligible expenditures may make sense in particular circumstances, specific financial engineering tools may yet be another possibility... Probably a mix of these and other suggestions should be considered.

In the Portuguese case, public grants come from the NSRF on a competitive basis and according to the general rules governing structural funds application within national borders. As there was no own budget for this policy, it was necessary to design a rather sophisticated institutional system that would combine a close articulation of NSRF operational structures and the development of specific merit assessment procedures. These procedures were necessary because NSRF rules are meant for individual and mono-type projects. On the contrary, CES applications proceed from collective applications and each application consists of multiple projects, involving very different types of investment and other structural actions (ranging from professional training to laboratorial experimentation, to market research, to patent registration, to congress arena construction, to the opening of nature walk tracks, etc.). So, it was necessary to devise a screening mechanism acceptable by NSRF authorities, a mechanism that would secure the integrity of the common strategy to be implemented

¹⁹ Every EU Member State has an NSRF to frame the application of cohesion policy grants within national borders from 2007 to 2015 (programming lasts to 2013 only).

by the agents' consortium without exempting the merit evaluation of every single project according to the relevant NSRF operational programme.²⁰

7.4 Access to public encouragement

If a country wishing to adopt CES tools is considering the implementation of either administrative inducements, financial incentives or both, it needs a screening device to decide the allocation of public support. Who deserves to get such encouragement? Again, the solution to this issue depends a lot on the quality requirements of the CES programme and the prevailing initial conditions, thus rendering impossible the drafting of a one-size-fits-all screening device. We just sketch the Portuguese approach for inspirational purposes.

As a response to the need of integrating the collective efficiency rationale in the competitive public funding allocation to structural projects, the ministries of regional development and economy worked out a common framework to boost high quality action programme proposals and to select the best of them. The framework became known as the "official recognition of the action programme as a *Type X*²¹ Collective Efficiency Strategy". This selection procedure would take place before actual project applications would be submitted to NSRF managing authorities.

The idea was to define a sound accreditation mechanism to assure credibility to and respect for the structural interventions a recognised partnership intends to run. Indeed, a competition to select the best action programmes was organised in 2008. There were selection criteria regarding the action programme quality as well as its impacts on the economic sector and the relevant territory. The winning applications received on July 2009 a governmental recognition as a Collective Efficiency Strategy in the form of an inter-ministerial order.²² This screening device was, therefore, structured to appraise the absolute and relative merit of each action programme application. It was devised as a quality stamp to be given to selected action programmes. Thus, it also imposed specific obligations to partners and public services, such as implementation time line, interim assessments, appointment of public agencies responsible for boosting, monitoring and assessing each CES, and preferential access rules to financial incentives.

So, after the recognition was given, awarded partnerships could set up their organisation and prepare their project applications to operational programmes. Each application contains a label identifying it as a CES project. This label confers the project the rights described in the governmental order provided that it complies with the absolute merit and other requirements determined by managing authorities. In the Portuguese case, there were no political conditions so far to include administrative

²⁰ Again, for further details of this compatibility exercise (in the case of the PROVERE type of CES), see Baleiras (2011c, Subsections 4.2 and 4.4 through 4.7).

²¹ With X being PCT, OC or PROVERE. The ARDU type followed a different screening device.

²² Proposed by the minister in charge of regional development and agreed by the ministers chairing the political coordination commission of each NSRF operational programme.

facilitation in the public encouragement package. Further details of the recognition process can be found in NSRF (2008).

8 Alignment with post-2013 European political guidelines

Europe is preparing the next cycle of community and national policies. It is expected to start in 2014. A number of major political orientations have already been decided at the highest level. It is interesting to note how the CES tools in Portugal have started to implement some of those future guidelines well before they were discussed. This may be useful to regard them as an inspiration for future policy choices both in Portugal and abroad. We will address here three policy documents: Europe's economic development strategy from 2010 to 2020, the so-called *Europe 2020 strategy*—European Commission (2010a); the *EU Budget Review*—European Commission (2010b); and the conclusions to the *fifth report on economic, social and territorial cohesion*—European Commission (2010c).

To begin with, CES find comfort in the objectives of the *Europe 2020 strategy*. CES help Europe to deliver smart, sustainable and inclusive growth and development on the ground: *smart* as CES either bring together knowledge providers and business innovators or induce innovative territorial specialisation which generates economic value from relatively idle endogenous assets; *sustainable* because CES are competitiveness oriented, the marketability of PROVERE's collective efficiency activities is based on the durability of natural, heritage and man-made resources and the selection criteria of all four CES typologies can induce a greener resource use; *inclusive* inasmuch as partnerships mobilise endogenous factors and, particularly in the case of ARDU and PROVERE varieties, the business and job creation focus will help to renew population and bring people back to the labour market in socially fragile territories.

Secondly, the *EU Budget Review*. Pp. 11 and 13 in European Commission (2010b) recommend stronger, more effective policy coordination among the major community funds for structural actions and encourage Member States to use the *Common Strategic Framework* to bring more rationality to their use. We could not agree more with this viewpoint as regional development commands integrated policy approaches. Yet, we know by own experience the political difficulties the Council and (national) central governments have had so far to coordinate effectively those funds. Being widely open in terms of expenditure eligibility, CES tools call on authorities to make current (EU structural) fund rules more flexible, notably in terms of geographic eligibility boundaries and multiple fund arrangements. They also press cohesion, rural development and employment policies to find articulated solutions indispensable to promote integrated development plans. Thus, CES are a practical example of the need for effective cross-policy coordination.

Finally, the *fifth report on economic, social and territorial cohesion*. We know that the conclusions in this document follow a three-year long strategic debate with Member States and other relevant

stakeholders which seem to endorse those advices.²³ We believe CES contribute actively to the delivery of the outlined recommendations for the future cohesion policy. In particular, we find comfort in the following ideas of European Commission (2010c):

- *Increased thematic concentration* (heading 2.2);
- *Strengthening performance through conditionality and incentives* (heading 2.3);
- *Strengthening governance* (heading 3);

Let us focus attention on heading 3 to see how CES may help to implement its recommendations. First, the *territorial cohesion dimension* (heading 3.1) added by the Lisbon Treaty to the EU ultimate goals. On pp. xxviii and xxix, the conclusions urge Member States to address the (new) territorial cohesion objective “with particular emphasis on the role of cities (and) areas facing specific geographical or demographic problems”. ARDU, in the case of cities, and PROVERE, in the case of low population density areas, are two actual devices to foster territorial cohesion along those lines. CES also address the recommended need for “greater flexibility in organising operational programmes in order to reflect the nature and geography of development processes better” by offering a feasible solution that reconciles functional territories with the administrative geographies upon which the NSRF operational programmes are organised. In fact, a few CES implementations in Portugal combine agents and actions located in regions covered by different operational programmes. Second, CES also help to implement the *partnership reinforcement* (heading 3.2) recommendation. Pp. xxix and xxx call for the full mobilisation of local and regional stakeholders and suggests the reinforced use of “local development approaches (...) by supporting active inclusion, fostering social innovation, developing innovation strategies or designing schemes for regeneration of deprived areas”. Moreover, p. xxi urge policy-makers to involve regional and local communities in policy design and implementation,²⁴ which is precisely what CES do. The CES methodology, anchored on self-governed partnerships emanating from below and heading for innovative competitive processes, is quite appropriate to stimulate those development approaches. Third, there is a recommendation to reduce reliance on non-reimbursable financial grants and to move “towards a more balanced mix, including financial engineering (...) as well as more indirect measures, such as advice and guidance and support for networking and clustering (...)”—pp. xx and xxi. As noted above, technical coaching to prepare and manage partnerships and administrative (licensing) inducements to implement investment projects are intrinsic parts of the public encouragement package of CES tools.

For all these reasons, we hope readers may find useful inspiration in the CES toolbox to adopt effective development policies in line with Europe’s objectives on the road to the year 2020.

²³ The Portuguese presidency of the EU, together with the European Commission, launched in the second semester of 2007 the political debate on the post-2013 cohesion policy.

²⁴ European Commission (2010c, p. xxi): “Evaluation evidence has demonstrated that the active participation of people and organisations in projects at regional and local level, from the design to the implementation stage, is a crucial success factor. Indeed, such partnership is one of the key sources of added-value of Cohesion Policy, mobilising the skills and knowledge of those concerned to make programmes more effective and inclusive”.

9 Concluding remarks

This paper has exposed readers to CES, an innovative family of policy instruments devoted to competitiveness, business boosting and job creation within the modern view of economic development policy. As such, many specific endogenous elements are worked out via a dynamic network of top-down and bottom-up inputs. Cooperation is the cornerstone of each of the four types of CES. The collective efficiency concept underlies the doctrinal background of this public policy.

A number of specific experiments are already on the ground and the first interim independent assessments are expected to become available in early 2012. The author's political responsibilities until October 2009 for the design and launching of CES allows him to recognise their breakthrough contribution for a nationwide endogenous regional development approach. Yet, he is very much aware of the difficulties and threats that still pave the way. He believes the difficulties these policy tools still face in Portugal may also operate in many other countries where cooperation and integrated cross-cutting policy approaches are not *business as usual*. Hence, the following paragraphs, with an explicit political assessment, may also provide useful alerts for possible CES adaptations elsewhere.

Actual Portuguese politics, still populated with so many players (from ministers to mayors to business association leaders) addicted on redistributive and top-down orientations, presented always a resistance wall to policy instruments, such as CES, that based their rationale on cooperative and strategy-founded initiatives. It is certainly easier and faster to keep doing investment projects the old way, based on infrastructure, individual initiative, non-competitive grants and wealth distribution goals. The current economic crisis eases the arguments in favour of spending EU structural funds no matter where and no matter what the opportunity cost is. In this environment, it is not hard to issue sound bytes claiming that collective efficiency projects are cumbersome and boring.²⁵ However, both economic theory and the actual experience of many countries, as Portugal's in recent years, bring to our mind that a sustainable development path should not dispense a view of the future where wealth fostering everywhere is a precondition to improve resource distribution. Particularly in the case of small open economies, deliberate cooperation or *collective efficiency* among agents seems a very promising route to approach that view. CES tools were devised to help firms, research centres, municipalities, public administration units, regional development agencies, local action groups, etc. to embark on horizontal and vertical cooperation arrangements to generate value out of knowledge and other endogenous territorial assets, thus serving the long term cause of economic development.

As with many other innovative instruments that challenge the *status quo*, independent and competent technical evaluation is indispensable to guide future political decisions, to improve what has

²⁵ Some people say in the media that Portugal needs to spend NSRF money urgently, acting as if financial disbursement were the sole criterion to assess the quality of structural funds use. It seems in their arguing that burning 1 million euros digging a hole to simply covering it up subsequently is better than not spending the money. They ignore the opportunity cost of such spending. To begin with, on average 50% of Portuguese taxpayers' money is included in any structural fund intervention. Moreover, money spent on holes gets buried forever and is money that will not be used to improve the economy's capacity to grow (supply side).

been achieved so far, and we hope this job will be done in Portugal with the CES tools. This is important because a tool that demands so much from the policy addressees needs time to produce results; a critical mass of policy persistence, topped with affection from both politicians and officials in charge, are two necessary conditions for new, complex instruments to mature and deliver their results. This is very much important because CES effectiveness relies on trust, trust between partners to undertake structural changes but also trust of partners in the time consistency of government options. The tragedy of many countries has a lot to do with the temptation of new government members, even from the same political family, to *reinvent the wheel* and replace short-lived instruments with new ones bearing their fingerprint. Adapting what John Lennon once wrote, “all we are saying (to responsible policy-makers) is give CES a chance”.²⁶

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²⁶ Now that you went through the paper, why not taking a break with Lennon’s “Give peace a chance?” Enjoy the video performance at <http://video.google.com/videoplay?docid=3690595027794156173#>.

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